FISH POPULATION MONITORING

Radio Telemetry of Shortnose and Lost River Suckers in 1996-1997

Radio telemetry studies conducted by the Bureau of Reclamation began in 1991 to respond to the need for additional information on life history, distribution, and movement patterns of endangered suckers in the Upper Klamath Basin. Efforts were expanded to include Agency Lake and specifically Wood River spawning fish in 1996. Five suckers were trapped and radio-tagged near the mouth of the Wood River in the spring of 1996.

General movement patterns suggest that as water quality declines in the summer months, traditional areas of refuge are sought by suckers in northwest upper Klamath Lake as well as the mouth of the Wood River and the northern third of Agency Lake. Spawning in the Wood River apparently occurs 2-3 weeks later (late May) than what has been observed in the Williamson River (April). Two of the five radio-tagged fish apparently succumbed to fish-kill events that occurred in June of 1996 and in August 1997. Three of the five fish moved into Upper Klamath Lake either shortly after being tagged or shortly after spawning. No spawning activity was observed in two of the five fish even though all five were gravid with egg spawn when tagged in 1996. One fish was tracked as far upstream as Fort Klamath during the spawning migration in the spring of 1996.

Redband Trout Spawning Surveys and Radio Telemetry 1997

Oregon Department of Fish and Wildlife (ODFW), in cooperation with the Bureau of Reclamation and Oregon Trout, have radio-tagged adult redband trout in the Wood River. The results of this work will be added as a supplemental report at such time that it becomes available.

1998

Introduction: This section of the report includes fish monitoring and inventory relating to wetland and channel restoration. In general, sampling categories are as follows:

- Interior wetland - Sampling of fish populations within the interior wetland. The objective is to gather baseline information on fish abundance and distribution as habitat changes over time.

- Wood River larval and juvenile out-migration - This included sampling with a shoreline orientated trap net and fishing with drift nets and Fyke nets off the Dike Road bridge. The objective is to gather baseline information on timing of early life stages and species presence of suckers and trout in the project area.

- Channel Construction Salvage - Data presented here includes capture data from efforts to collect fish that would be harmed from channel construction activities. The goal was to collect and move all fish before dredging and filling (except fathead minnows) and move them into un-impacted areas of the Wood River.

Interior Wetland: Gear deployed to sample fish presence within the interior marsh consisted a single ½ inch mesh trap net with a 100 foot lead extension. Traps were set for two nights each at two pond habitat sites between July 9, 1998 and August 6, 1998. The ponds were created from the removal of borrow material for dike building in 1996 and 1997. The ponds are located near the northeast corner the property and near the Wood River pump station. Shoreline vegetation at these sites is relatively sparse consisting mostly of recently colonized willow, *Potamogeton*, aquatic smartweed and scattered bullrush. Average and maximum depths are approximately three feet and five feet respectively. Little or no emergent vegetation was noted and bottom substrate was a mixture of peat and pumice sand. Figure 1 below represents the combined catch at both pond sites. All of the fish sampled except the chub species are introduced species to the Klamath Basin.

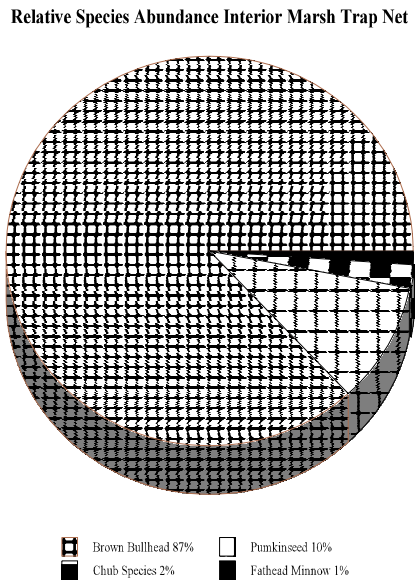

Figure 8.

A single water quality sample was taken with a multi probe Hydrolab device at the pump pond trap site:

Date:	07/16/98		
Time:	1544	**Total Dissolved Solids:**	0.181
Temp:	34.25 degrees Celsius	**pH:**	7.46
Sample depth:	0.4 m	**D.O.:**	4.31 mg/l O
Spec Cond:	283 us	**D.O. saturation:**	60.1%

Of particular note in this water quality sample was the extremely high water temperature of 96.65 degrees Fahrenheit.

The limitations of the data collected on the interior ponds are significant. The data represent an extremely small temporal and spacial sample. Additionally, there are gear limitations that include species and size specific trap avoidance. Since the trap is effective only for fish over 60 mm fork length, small species such as fathead minnow are likely under-represented. All of the brown bullhead captured were from a single trap set in the pump pond.

Wood River larval and juvenile out-migration. The larval trap net was used to monitor fish presence in the 1998 construction area and to obtain information on presence and timing of possible larval or juvenile out-migration. Unfortunately, no suckers or trout were sampled using this method. The trap was set in moving water sections of the existing west shoreline of the Wood River and within historic channel meanders before construction began. The trap, consisting of 1 mm nytex was set overnight on 5 occasions between July 15 and July 22, 1998.

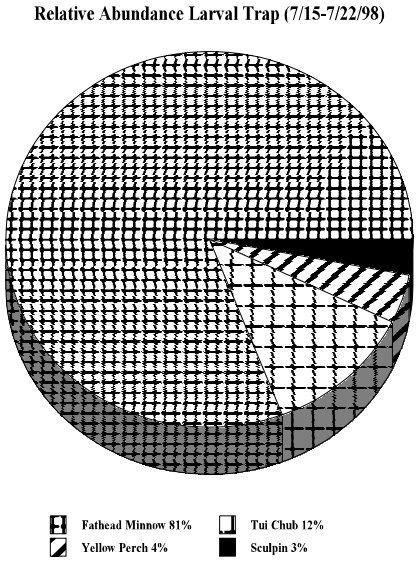

Figure 9.

Figure 9 is combined data from all trap nights. Fathead minnow was the most frequently captured fish for most trap locations. One significant gear bias may have been that schooling fish such as juvenile fathead minnows may have been attracted to the trap as cover structure. Additionally, shoreline areas were generally low velocity and migrating juvenile trout and suckers may have been avoiding these areas.

Drift nets and a fyke net were deployed off the Dike road bridge on July 22 from approximately 7 PM to 8 PM. No fish were captured. On July 28, the same traps were deployed at two hour intervals from 6 PM to midnight. One redband trout (90 mm FL) and one juvenile sucker (Catostomidae) at 63 mm FL were captured in the large Fyke net

Channel Construction Salvage. The objective of the fish salvage was to rescue fish just after areas were hydro logically isolated for dredging and filling operations. In 1998, this occurred in the upper two historic meander bends and in the adjacent existing Wood River channel (approximately 4 acres of aquatic habitat). The historic meander bends had much of the submergent and floating vegetation (primarily aquatic buttercup) manually removed one week prior to salvage activities. This activity, in combination with heavy boat traffic, may have displaced many of the fish prior to the salvage activity. Seining with 1/8 inch beech seines and two passes with backpack electro shockers were the methods used to capture fish. Fish were placed in containers and then moved to the Wood River below the construction site where fish were identified to species, measured, and released. Figure 3 represents the combined capture between 8/17/98 to 8/24/98.

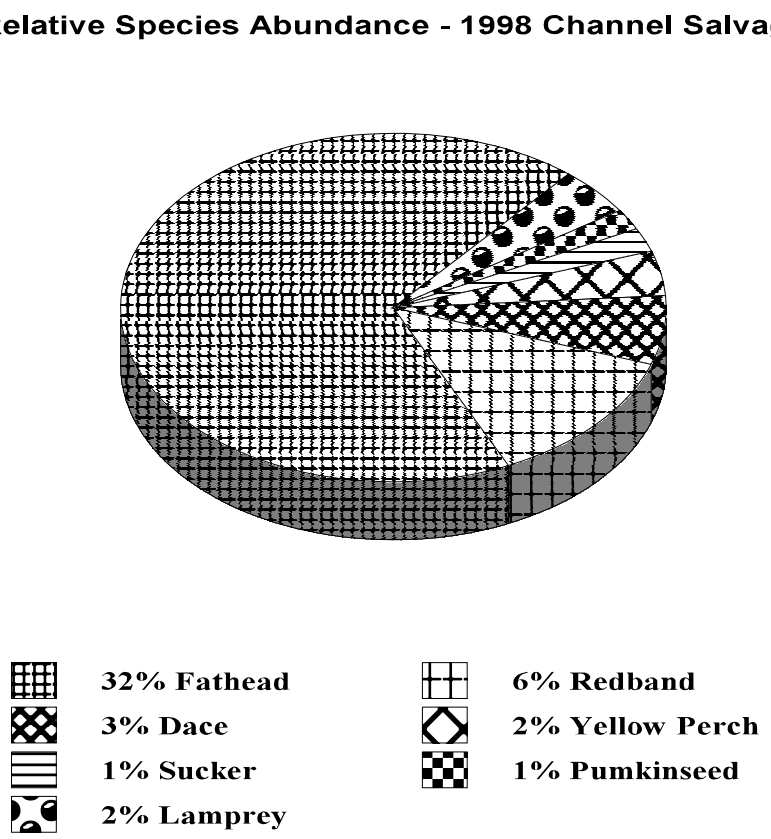

Figure 10.

Fathead minnows are under-represented in the sample due to an intentional effort to avoid capturing them while electro shocking. They were abundant in the warm water micro habitats among floating mats of aquatic *Ranunculus* in both the historic meander bends, and in the main channel. Additionally, sculpin are likely under-represented due to their escape by nosing into soft substrate. Three sculpin species were represented in the capture data. However, due to time constraints, no attempt was made to quantify relative abundance. Sculpin species observed include the marbled sculpin (*Cottus klamathensis*), the Klamath Lake sculpin (*Cottus princeps*), and the slender sculpin (*Cottus tenuis*). All lamprey (*Lampetra)* captured were ameocetes (larval form). No attempt was made to identify lamprey ameocetes to species. All suckers (4 total) were 1998 cohort (59-77 mm FL) and were identified as shortnose suckers (*Chasmistes brevirostris*).

There is some degree of uncertainty in distinguishing between juvenile Klamath large-scale suckers (*Catostomus snyderi*) and shortnose suckers. Redband trout were captured only in the historic meander bends.

Relative Species Abundance Snorkle Survey (7/22/98)

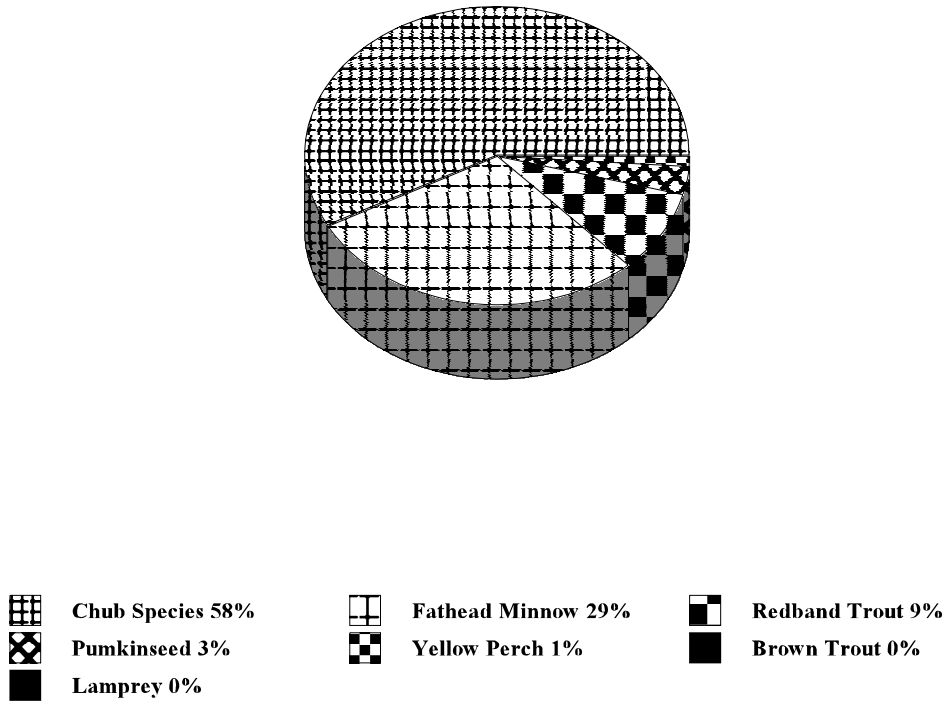

Figure 11.

Snorkel survey. A single snorkel survey was conducted in the 1998 construction area on July 22, 1998. The purpose was to assess the need for fish salvage related to construction activity and to determine if snorkel surveys could be a viable project monitoring tool. Three snorkelers drifted downstream while attempting to stay equidistant from each other and the shoreline. Figure 5 represents relative species abundance observed in the 1998 project area. All redband trout were observed in a cohesive school in the deep water of the lower meander bend. Most of these trout were in the 150 to 250 mm fork length size range. Only one brown trout (80 mm) and one lamprey were observed. No fish were observed in the main channel. Notable limitations to this survey included dense aquatic vegetation, deep water, turbidity, and high channel width.

1999

Fish Salvage

The construction sequence for the Wood River channel restoration work resulted in the flowing water to be contained within a channel that was designed to replicate the historic dimensions of the river (approximately 50' wide and 6'-8' deep). Once the flow was contained within this new (historic) channel, the previously dredged channel needed to be filled . The restoration design called for the previously dredged channel to be filled to an elevation approximately the same as the original flood plain. Prior to the fill work beginning. The area to be filled was partitioned into segments, and fish remaining in these isolated segments were captured and returned to the river (salvaged). The following table displays the results of that salvage effort, and required 137 person hours to complete. During the salvage, backpack electro-fishing and dip nets were used to capture fish. Non native fathead minnows were the most abundant fish present, and were not salvaged.

Table 8. 1999 Fish Salvage for Wood River Channel Restoration

Date	Redband Trout	Sucker sp.	Yellow Perch	Speckled Dace	Tui Chub	Blue Chub	Sculpin sp.	Lamprey sp.
7/27/99	1	1	1		4		14	2
7/29/99	2	6	2		55	20	6	
8/26/99	3	2	11	1	11		20	1
8/31/99	11	6	20		17	33	25	
9/1/99		35	52		236	112	9	1
9/7/99		123	165		250	198	36	1
9/8/99		54			369	280	15	1
9/9/99		17	24		102	124	2	
913/99	1	68	165		190	133	38	2
9/14/99		39	311	1	130	148	56	4
TOTAL	**18**	**351**	**751**	**2***	**1364**	**1048**	**221**	**12**

***** The numbers of speckled dace and other species (young of the year size classes) are under estimated, because fish that appeared to be fathead minnows during the electro-fishing, were not netted for salvage.

Fish Trapping

A technical team of experts in fisheries biology, geomorphology, and engineering has been meeting during the past two years to design and coordinate the river channel restoration project. The timing of the out-migration of young fish from the river to the lake was identified as information that would help minimize the short term impacts of the construction work associated with work planned for the summer and fall of 2000. A rotating drum screw trap was obtained through the cooperation of U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, Oregon Department of Fish and Wildlife the Klamath Tribes and Oregon Trout. The trap was placed approximately one mile upstream from entrance road bridge. The following table displays the results of running the trap from August through December of 1999. Trapping efforts will continue over the next two years.

Table 9. Screw Trap data from Wood River 8-24-99 through 12-20-99

Species Code Abbreviations:
ONMYSSP - Redband Trout; PEFL - Yellow Perch; COTT - Sculpin Species
GICO - Blue Chub ; GIBISSP - Tui Chub; PIPR - Fathead Minnow
CASP - Catostmoid Family; LASP - Lamprey; COKL - Marbled Sculpin
COTE - Slender Sculpin; RHOS - Speckled Dace.

Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
8-24-99	1500	23.5	COTT	60	
8-24-99	1500	23.5	GICO	122	
8-24-99	1500	23.5	ONMYSSP	74	
8-24-99	1500	23.5	ONMYSSP	83	
8-24-99	1500	23.5	ONMYSSP	88	
8-24-99	1500	23.5	ONMYSSP	96	
8-24-99	1500	23.5	PEFL	99	
8-24-99	1500	23.5	PIPR	31	
8-24-99	1500	23.5	PIPR	31	
8-26-99	1530	22	COTT	87	
8-26-99	1530	22	ONMYSSP	62	
8-26-99	1530	22	ONMYSSP	69	
8-26-99	1530	22	ONMYSSP	87	
8-26-99	1530	22	ONMYSSP	90	
8-26-99	1530	22	ONMYSSP	93	
8-26-99	1530	22	ONMYSSP	97	
8-26-99	1530	22	ONMYSSP	99	
8-26-99	1530	22	ONMYSSP	105	
8-26-99	1530	22	ONMYSSP	105	

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
8-26-99	1530	22	ONMYSSP	105	
8-26-99	1530	22	ONMYSSP	105	
8-26-99	1530	22	PIPR		NOT MEASURED
8-26-99	1530	22	PIPR		NOT MEASURED
8-26-99	1530	22	PIPR		NOT MEASURED
8-30-99	1100	24	CASP	58	
8-30-99	1100	24	GIBISSP	43	
8-30-99	1100	24	LASP	70	
8-30-99	1100	24	LASP	100	
8-30-99	1100	24	LASP	105	
8-30-99	1100	24	LASP	110	
8-30-99	1100	24	LASP	120	
8-30-99	1100	24	LASP	150	
8-30-99	1100	24	ONMYSSP	38	
8-30-99	1100	24	ONMYSSP	38	
8-30-99	1100	24	ONMYSSP	39	
8-30-99	1100	24	ONMYSSP	53	
8-30-99	1100	24	ONMYSSP	56	
8-30-99	1100	24	ONMYSSP	65	
8-30-99	1100	24	ONMYSSP	68	
8-30-99	1100	24	ONMYSSP	75	
8-30-99	1100	24	ONMYSSP	78	
8-30-99	1100	24	ONMYSSP	78	
8-30-99	1100	24	ONMYSSP	79	
8-30-99	1100	24	ONMYSSP	80	

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
8-30-99	1100	24	ONMYSSP	82	
8-30-99	1100	24	ONMYSSP	83	
8-30-99	1100	24	ONMYSSP	83	
8-30-99	1100	24	ONMYSSP	83	
8-30-99	1100	24	ONMYSSP	84	
8-30-99	1100	24	ONMYSSP	84	
8-30-99	1100	24	ONMYSSP	85	
8-30-99	1100	24	ONMYSSP	85	
8-30-99	1100	24	ONMYSSP	85	
8-30-99	1100	24	ONMYSSP	85	
8-30-99	1100	24	ONMYSSP	87	
8-30-99	1100	24	ONMYSSP	88	
8-30-99	1100	24	ONMYSSP	90	
8-30-99	1100	24	ONMYSSP	91	
8-30-99	1100	24	ONMYSSP	92	
8-30-99	1100	24	ONMYSSP	92	
8-30-99	1100	24	ONMYSSP	95	
8-30-99	1100	24	ONMYSSP	95	
8-30-99	1100	24	ONMYSSP	102	
8-30-99	1100	24	ONMYSSP	102	
8-30-99	1100	24	ONMYSSP	104	
8-30-99	1100	24	ONMYSSP	106	
8-30-99	1100	24	ONMYSSP	108	
8-30-99	1100	24	PIPR		NOT MEASURED
8-30-99	1100	24	PIPR		NOT MEASURED

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
8-30-99	1100	24	PIPR		NOT MEASURED
8-31-99	1130	25	COTT	40	
8-31-99	1130	25	COTT	61	
8-31-99	1130	25	COTT	75	
8-31-99	1130	25	COTT	90	
8-31-99	1130	25	GICO	53	
8-31-99	1130	25	LASP	100	
8-31-99	1130	25	LASP	140	
8-31-99	1130	25	lASP	150	
8-31-99	1130	25	ONMYSSP	45	
8-31-99	1130	25	ONMYSSP	66	
8-31-99	1130	25	ONMYSSP	66	
8-31-99	1130	25	ONMYSSP	69	
8-31-99	1130	25	ONMYSSP	72	
8-31-99	1130	25	ONMYSSP	77	
8-31-99	1130	25	ONMYSSP	79	
8-31-99	1130	25	ONMYSSP	83	
8-31-99	1130	25	ONMYSSP	87	
8-31-99	1130	25	ONMYSSP	89	
8-31-99	1130	25	ONMYSSP	90	
8-31-99	1130	25	ONMYSSP	91	
8-31-99	1130	25	ONMYSSP	92	
8-31-99	1130	25	ONMYSSP	94	
8-31-99	1130	25	ONMYSSP	98	
8-31-99	1130	25	ONMYSSP	102	
8-31-99	1130	25	ONMYSSP	105	

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
8-31-99	1130	25	ONMYSSP	106	
8-31-99	1130	25	ONMYSSP	109	
8-31-99	1130	25	ONMYSSP	110	
8-31-99	1130	25	ONMYSSP	113	
8-31-99	1130	25	PIPR	47	
9-1-99	1230	24.5	COTT	48	
9-1-99	1230	24.5	COTT	84	
9-1-99	1230	24.5	COTT	85	
9-1-99	1230	24.5	LASP	145	
9-1-99	1230	24.5	LASP	165	
9-1-99	1230	24.5	ONMYSSP	46	
9-1-99	1230	24.5	ONMYSSP	64	
9-1-99	1230	24.5	ONMYSSP	65	
9-1-99	1230	24.5	ONMYSSP	66	
9-1-99	1230	24.5	ONMYSSP	66	
9-1-99	1230	24.5	ONMYSSP	74	
9-1-99	1230	24.5	ONMYSSP	76	
9-1-99	1230	24.5	ONMYSSP	86	
9-1-99	1230	24.5	ONMYSSP	86	
9-1-99	1230	24.5	ONMYSSP	91	
9-1-99	1230	24.5	ONMYSSP	92	
9-1-99	1230	24.5	ONMYSSP	105	
9-1-99	1230	24.5	ONMYSSP	106	
9-1-99	1230	24.5	ONMYSSP	112	
9-1-99	1230	24.5	ONMYSSP	112	
9-1-99	1230	24.5	ONMYSSP	113	
9-1-99	1230	24.5	ONMYSSP	114	

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
9-1-99	1230	24.5	PIPR	61	
9-1-99	1230	24.5	PIPR	65	
9-1-99	1230	24.5	PIPR	66	
9-1-99	1230	24.5	PIPR	66	
9-7-99	1230	23.5	CASP	102	
9-7-99	1230	23.5	COTT	55	
9-7-99	1230	23.5	COTT	86	
9-7-99	1230	23.5	GIBISSP	18	
9-7-99	1230	23.5	GIBISSP	65	
9-7-99	1230	23.5	GIBISSP	125	
9-7-99	1230	23.5	GIBISSP	126	
9-7-99	1230	23.5	LASP	175	
9-7-99	1230	23.5	ONMYSSP	38	
9-7-99	1230	23.5	ONMYSSP	82	
9-7-99	1230	23.5	PIPR	37	
9-7-99	1230	23.5	PIPR	56	
9-7-99	1230	23.5	PIPR	60	
9-8-99	1215	24	COTT	50	
9-8-99	1215	24	GIBISSP	74	
9-8-99	1215	24	GIBISSP	119	
9-8-99	1215	24	LASP	140	
9-8-99	1215	24	ONMYSSP	34	
9-8-99	1215	24	ONMYSSP	45	
9-8-99	1215	24	ONMYSSP	66	
9-8-99	1215	24	PIPR		NOT MEASURED

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
9-8-99	1215	24	PIPR		NOT MEASURED
9-13-99	1430	23	CASP	66	
9-13-99	1430	23	COTT	85	
9-13-99	1430	23	COTT	94	
9-13-99	1430	23	GIBISSP	59	
9-13-99	1430	23	GICO	45	
9-13-99	1430	23	GICO	52	
9-13-99	1430	23	GICO	54	
9-13-99	1430	23	GICO	123	
9-13-99	1430	23	GICO	140	
9-13-99	1430	23	ONMYSSP	62	
9-13-99	1430	23	ONMYSSP	94	
9-13-99	1430	23	PIPR	33	
9-13-99	1430	23	PIPR	38	
9-13-99	1430	23	PIPR	56	
9-13-99	1430	23	PIPR	61	
9-13-99	1430	23	PIPR	61	
9-13-99	1430	23	RHOS	35	
9-13-99	1430	23	RHOS	35	
9-13-99	1430	23	RHOS	49	
9-13-99	1430	23	RHOS	52	
9-14-99	1330	22.5	COKL	40	
9-14-99	1330	22.5	COKL	42	
9-14-99	1330	22.5	COKL	45	
9-14-99	1330	22.5	COKL	46	
9-14-99	1330	22.5	COKL	52	

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Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
9-14-99	1330	22.5	COTE	45	
9-14-99	1330	22.5	LASP	97	
9-14-99	1330	22.5	LASP	120	
9-14-99	1330	22.5	LASP	154	
9-14-99	1330	22.5	PIPR	42	
9-14-99	1330	22.5	PIPR	43	
9-14-99	1330	22.5	PIPR	63	
9-14-99	1330	22.5	RHOS	38	
9-14-99	1330	22.5	RHOS	38	
9-14-99	1330	22.5	RHOS	42	
9-14-99	1330	22.5	RHOS	43	
9-20-99	1200	22.5	COKL	38	
9-20-99	1200	22.5	GICO	79	
9-20-99	1200	22.5	ONMYSSP	59	
9-20-99	1200	22.5	ONMYSSP	98	
9-20-99	1200	22.5	ONMYSSP	107	
9-20-99	1200	22.5	ONMYSSP	156	
9-20-99	1200	22.5	PEPL	58	
9-21-99	1200	24	COTE	42	
9-21-99	1200	24	COTE	74	
9-21-99	1200	24	PEPL	107	
9-22-99	1251	26.5	COKL	45	
9-22-99	1251	26.5	COKL	77	
9-22-99	1251	26.5	COTE	41	
9-22-99	1251	26.5	COTE	57	
9-22-99	1251	26.5	GICO	66	
9-22-99	1251	26.5	ONMYSSP	100	

Table 9. Screw Trap data from Wood River 8-24-99 through 12-20-99

Species Code Abbreviations:
ONMYSSP - Redband Trout; PEFL - Yellow Perch; COTT - Sculpin Species
GICO - Blue Chub ; GIBISSP - Tui Chub; PIPR - Fathead Minnow
CASP - Catostmoid Family; LASP - Lamprey; COKL - Marbled Sculpin
COTE - Slender Sculpin; RHOS - Speckled Dace.

Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
9-22-99	1251	26.5	PEPL	58	
9-27-99	1500	22	GIBISSP	155	
9-27-99	1500	22	GICO	138	
9-27-99	1500	22	ONMYSSP	61	
9-27-99	1500	22	ONMYSSP	77	
9-27-99	1500	22	ONMYSSP	85	
9-27-99	1500	22	ONMYSSP	96	
9-27-99	1500	22	ONMYSSP	105	
9-27-99	1500	22	ONMYSSP	118	
9-27-99	1500	22	PIPR	35	
9-27-99	1500	22	PIPR	37	
9-28-99	1400	24	COKL	63	
9-28-99	1400	24	LASP	140	
9-28-99	1400	24	ONMYSSP	70	
9-28-99	1400	24	ONMYSSP	89	
9-28-99	1400	24	ONMYSSP	95	
9-28-99	1400	24	ONMYSSP	110	
9-28-99	1400	24	ONMYSSP	120	
9-28-99	1400	24	ONMYSSP	130	
9-28-99	1400	24	ONMYSSP	135	
9-28-99	1400	24	RHOS	45	
10-7-99	1230	22.5	GICO	136	
10-7-99	1230	22.5	LASP	80	
10-7-99	1230	22.5	LASP	85	
10-7-99	1230	22.5	LASP	90	
10-7-99	1230	22.5	LASP	95	
10-7-99	1230	22.5	LASP	95	

Table 9. Screw Trap data from Wood River 8-24-99 through 12-20-99

Species Code Abbreviations:
ONMYSSP - Redband Trout; PEFL - Yellow Perch; COTT - Sculpin Species
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CASP - Catostmoid Family; LASP - Lamprey; COKL - Marbled Sculpin
COTE - Slender Sculpin; RHOS - Speckled Dace.

Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
10-7-99	1230	22.5	LASP	105	
10-7-99	1230	22.5	LASP	125	
10-7-99	1230	22.5	LASP	130	
10-7-99	1230	22.5	PIPR	46	
10-13-99	1200	26.5	COTE	61	
10-13-99	1200	26.5	LASP	75	
10-13-99	1200	26.5	LASP	95	
10-13-99	1200	26.5	LASP	115	
10-13-99	1200	26.5	LASP	140	
10-21-99	1200	26.5	LASP	115	
10-21-99	1200	26.5	ONMYSSP	121	
10-21-99	1200	26.5	PIPR	29	
10-25-99	1600	18			NO FISH
11-15-99	1336	24	ONMYSSP	85	
11-15-99	1336	24	ONMYSSP	124	
11-18-99	0930	23.5	GIBISSP	85	
11-18-99	0930	23.5	GICO	67	
11-23-99	1330	25	GIBISSP	33	
11-29-99	1125	25	COTE	75	
11-29-99	1125	25	ONMYSSP	95	
11-30-99	1235	24	GICO	100	
11-30-99	1235	24	ONMYSSP	180	
12-2-99	1230	24.5	COKL	39	
12-2-99	1230	24.5	GICO	102	
12-6-99	1230	24.5	COKL	64	
12-6-99	1230	24.5	ONMYSSP	85	
12-7-99	1300	26	ONMYSSP	65	

Table 9. Screw Trap data from Wood River 8-24-99 through 12-20-99

Species Code Abbreviations:
ONMYSSP - Redband Trout; PEFL - Yellow Perch; COTT - Sculpin Species
GICO - Blue Chub ; GIBISSP - Tui Chub; PIPR - Fathead Minnow
CASP - Catostmoid Family; LASP - Lamprey; COKL - Marbled Sculpin
COTE - Slender Sculpin; RHOS - Speckled Dace.

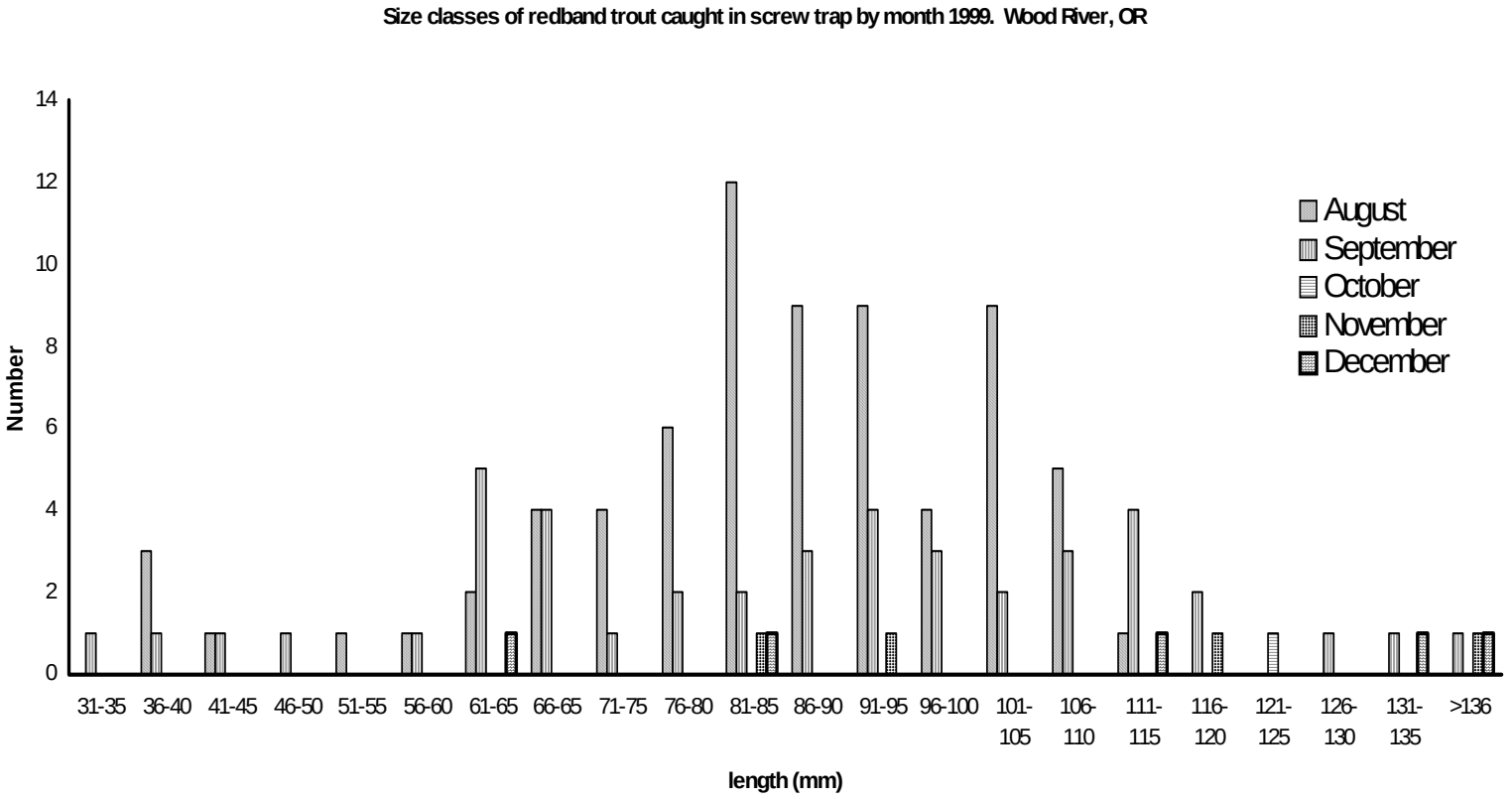
Date Set	Time Set	# Hours Fished	Species Code	Length (mm)	Comments
12-7-99	1300	26	ONMYSSP	146	
12-8-99	1300	24	PIPR	46	
12-8-99	1300	24	RHOS	36	
12-9-99	1300	24.75	ONMYSSP	132	
12-13-99	1300	24	LASP	160	
12-14-99	1300	24	ONMYSSP	115	
12-16-99	1300	25	GIBISSP		MORT/CUT IN HALF
12-16-99	1300	25	LASP	141	

* All lampreys were ameocetes and we could not distinguish species

Table 10. Redband Trout Caught

Date	Number	Date	Number	Date	Number
8-24-99	4	10-21-99	1		
8-26-99	11	10-25-99	0		
8-30-99	34	11-15-99	2		
8-31-99	21	11-18-99	0		
9-1-99	17	11-23-99	0		
9-7-99	2	11-29-99	1		
9-8-99	3	11-30-99	1		
9-14-99	0	12-2-99	0		
9-20-99	4	12-6-99	1		
9-21-99	0	12-7-99	2		
9-22-99	1	12-8-99	8		
9-27-99	6	12-9-99	1		
9-28-99	7	12-13-99	0		

Table 10. Redband Trout Caught					
10-7-99	0	12-14-99	1		
10-13-99	0	12-16-99	0		
Length Grouping (mm)	**August**	**September**	**October**	**November**	**December**
31-35	0	1	0	0	0
36-40	3	1	0	0	0
41-45	1	1	0	0	0
46-50	0	1	0	0	0
51-55	1	0	0	0	0
56-60	1	1	0	0	0
61-65	2	5	0	0	1
66-70	4	4	0	0	0
71-75	4	1	0	0	0
76-80	6	2	0	0	0
81-85	12	2	0	1	1
86-90	9	3	0	0	0
91-95	9	4	0	1	0
96-100	4	3	0	0	0
101-105	9	2	0	0	0
106-110	5	3	0	0	0
111-115	1	4	0	0	1
116-120	0	2	0	1	0
121-125	0	0	1	0	0
126-130	0	1	0	0	0
131-135	0	1	0	0	1
>136	0	1	0	1	1


Size classes of redband trout caught in screw trap by month 1999. Wood River, OR
Number
0
2
4
6
8
10
12
14
August
September
October
November
December
31-35
36-40
41-45
46-50
51-55
56-60
61-65
66-65
71-75
76-80
81-85
86-90
91-95
96-100
101-105
106-110
111-115
116-120
121-125
126-130
131-135
>136
length (mm)